Journal of Business Models (2021), Vol. 9, No. 1, pp. 67-76

JOURNAL OF BUSINESS MODELS

Digital Platform Tactics: How to Implement Platform Strategy Over Time

Matthias Trischler[1], Philip Meier[2], Daniel Trabucchi[3]

Abstract

Platform-based business models are increasingly relevant. Scholars mainly focus on the strategic dimension, but what are the tactics to build and evolve digital platforms? This article proposes a novel framework, which assists in subdividing the scope of possible activities of digital platform sponsors in a temporal and contextual manner. The framework comprises four context dimensions (platform attributes, core product, governance, ecosystem) and four lifecycle phases (birth, expansion, leadership, renewal). In particular, three key insights emerge regarding the critical role of the leadership phase (in terms of institutional and regulatory influence and the need to build a defense) as well as a lack of studies in the renewal phase.

Keywords: Digital Platform Tactics; Strategic Implementation; Platform Business Model

Please cite this paper as: Trischler et al. (2021), Digital Platform Tactics: How to Implement Platform Strategy Over Time, Journal of Business Models, Vol. 9, No. 1, pp. 67-76

1 Centre for Technology Entrepreneurship; Technical University Denmark; Kgs. Lyngby; Denmark, mattri@dtu.dk
2 Alexander von Humboldt Institute for Internet and Society; Berlin; Germany
3 School of Management; Politecnico di Milano; Milan; Italy

DOI: https://doi.org/10.5278/jbm.v9i1.5908

Introduction

Digital platforms play a dominant role in the global economy (Gawer, 2020; Parker and Van Alstyne, 2018). This is evident in the high valuations for platform-based corporations and start-up "unicorns". Well-known examples include Airbnb, Amazon, Alibaba, or Uber, and more broadly those companies that "*use digital technologies and connectivity to exploit and control digitized resources that reside beyond the scope of the firm, creating value by facilitating connections across multiple sides, subject to cross-side network effects*" (Gawer, 2020, p. 1). These digital platforms have not only acquired economic dominance, they are also attracting increasing academic attention. In a recent literature review, Rietveld and Schilling (2020) have taken stock of the existing scholarly work and outlined four prevalent themes in digital platform research, one of which focuses on the platform sponsor and its dominant role in business ecosystems. The platform sponsor, sometimes also referred to as platform provider, hub or keystone firm, is the individual, organization, or consortium that owns, controls and promotes the platform.

This short conceptual paper builds on this theme. We collected findings on platform sponsors from different strands of literature, such as information systems (e.g. Parker and Van Alstyne, 2018), management studies (e.g. Helfat and Raubitschek, 2018) and economics (e.g. Zhu, 2019). However, two shortcomings were identified in the literature that cut across disciplines. First, we agree with other authors in criticizing the current literature for treating competitive outcomes as static, although platforms are fundamentally dynamic in nature (McIntyre et al., 2020a; de Reuver et al., 2018; Gawer, 2020). In other words, we are dealing with one of the fastest evolving phenomenon in management history (Trabucchi et al., 2019), yet the vast majority of literature is studying it statically. Second, we bemoan the overly narrow focus on discrete attributes of platform competition and align with scholars who urge to build a more holistic, unified perspective on digital platform strategies (de Reuver et al., 2018; Rietveld and Schilling, 2020). Suitably, Gawer (2020) encourages scholars to develop more complete and dynamic models of digital platform behavior.

To address these gaps, this paper builds on the unified model connecting a firm's strategy, business model and tactical activities (tactics) proposed by Casadesus-Masanell and Ricart (2010). Tactics, in this context, are a set of choices available to a firm based on its business model that determine how much value the firm creates and captures (Casadesus-Masanell and Ricart, 2010). The strategic decision to develop and implement a digital platform business model thus determines the tactical scope of the platform sponsor. We introduce the term digital platform tactics, which is defined as implementation activities available to digital platform sponsors. Despite its importance, the strategic management and business model literature mostly neglects these implementation activities when it comes to digital platforms (for notable exceptions see Trabucchi, 2020; Karhu et al., 2020 or Van Andel, 2019). Therefore, the next section introduces a novel framework for platform sponsors that assists in subdividing the scope of possible activities of digital platform sponsors in a temporal and contextual manner, which is further used as an interpretive lens to identify and map platform tactics in the existing platform literature.

Approach

This paper adopts a pragmatic interpretation of the strategy concept. Strategy is then about the fundamental decisions a company has to make in order to position itself in a competitive market. Tactics, on the other hand, refer to these decisions and describe the concrete actions to implement them (Mackay and Zundel, 2017). In line with our pragmatic view, Casadesus-Masanell and Ricart (2010) offer an integrated model to describe the interplay between a company's strategic choices, business models, and tactical activities. Here, strategy refers to "*the choice of business model through which the firm will compete*" (p. 196). The chosen business model then spans the boundaries for tactical activities as a modality for strategy implementation.

In order to address the aforementioned call for a more dynamic classification and holistic understanding of platforms, this paper focuses on how firms tactically implement strategic decisions to

build and operate platform business models. However, this article argues that tactical activities - as proposed by Casadesus-Masanell and Ricart (2010) - require further differentiation because the model describes them as unidimensional sequences of competitive choices without a *temporal* or *contextual* classification. This falls short, as platform business model boundaries tend to change over time and in scope (Gawer, 2020). Their model therefore does not allow for the development of a granular understanding of tactical implementation activities given the time and context dimension.

To address this, a framework is introduced for undertaking a temporal and contextual classification of tactical activities tailored to digital platform business models. The model builds on Teece (2017), by introducing the lifecycle phases birth, expansion, leadership, and renewal. According to Teece (2017), in the birth phase, a value proposition is devised to capture value from an innovation. During expansion, the business is scaled and refined while closing out rivals. Leadership entails keeping customers and partners engaged while maintaining a controlling position within the ecosystem. Finally, in the renewal stage, the platform sponsor brings in new ideas into the ecosystem in order to initiate new value generation.

For the purposes of contextual classification, the model distinguishes between tactical activities in the realms of platform attributes, the core product, governance mechanisms, and the surrounding ecosystem (Helfat and Raubitschek, 2018). Platform attributes refers to the technical architecture, including a stable core and a modular periphery (McIntyre et al., 2020b). The core product describes a manifestation of the platform's value proposition in a product or service (Sorri et al., 2019). Governance, in our model, refers to the setting and enforcing of rules or collective action on the platform (Rietveld and Schilling, 2020), and, lastly, ecosystem relates to autonomous actors linked to the platform with a shared interest in value creation and distribution (Jacobides et al., 2018).

The resulting framework is a four-by-four matrix (see Figure 1). Besides adding the two new dimensions to the tactical activities concept, we break down and arrange platform firms' strategic implementation activities by means of the new framework. In particu-

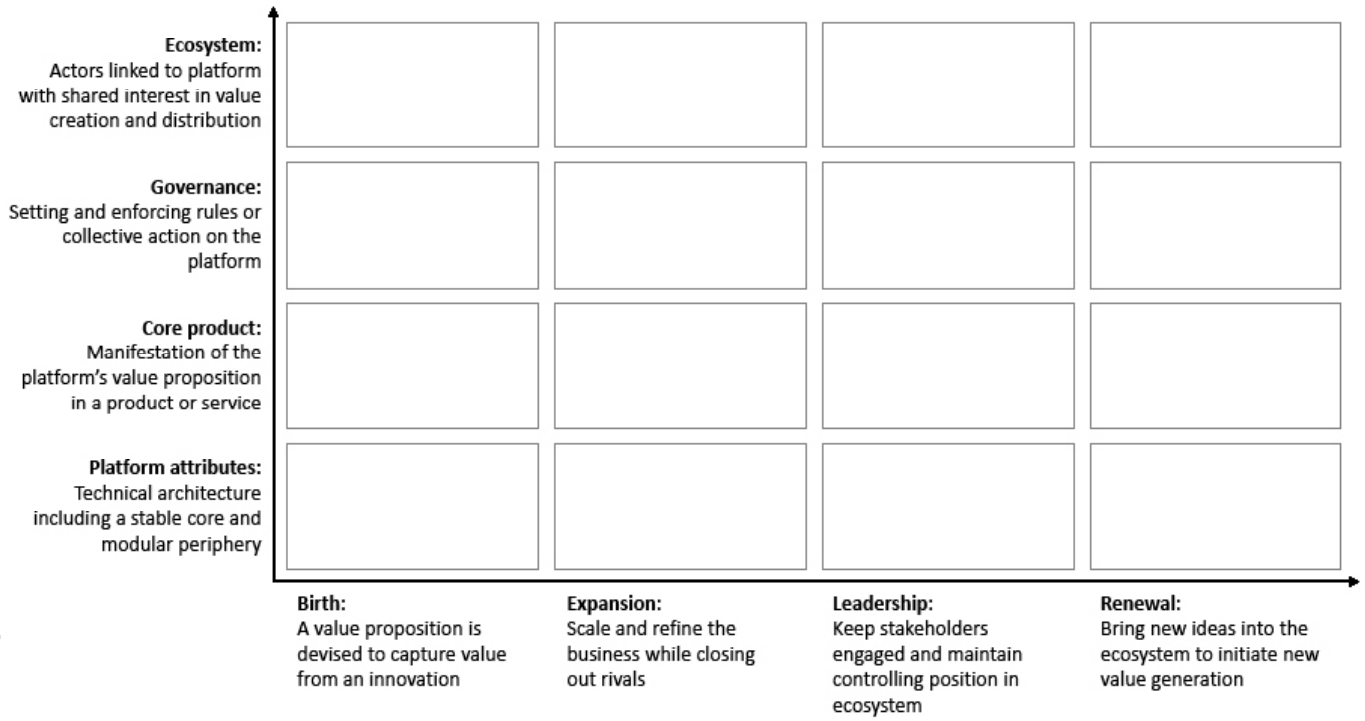

Figure 1: Digital Platform Tactics Framework

lar, we revisit existing literature on digital platforms, extract platform tactics as interpretative synthesis from case study descriptions (Rauch et al., 2014; Gawer, 2020) and allocate them in our framework (see Figure 2). To enhance the reliability of our findings, two authors initially mapped the tactics in the framework, which then was discussed and refined with the third author. Webster and Watson's (2002) approach guided the selection of relevant articles by suggesting starting at a leading journal in the field and extending the analytic scope "backward" and "forward". Concretely, the literature search started with the recent special issue in the *Strategic Management Journal* (Kretschmer et al., forthcoming) on "Platform Ecosystems as Meta-Organizations" and continued until a level of saturation – i. e. repetition of tactics – was reached.

Key insights

This short paper introduces the concept of digital platform tactics and a novel framework that can assist in subdividing the scope of possible activities of digital platform sponsors in a temporal and contextual manner. Figure 2 provides an overview of over 20 *first-order* tactics as well as three indicative insights (I, II, and III, in Figure 2), which will be discussed below. Importantly, a first-order tactic can accommodate multiple second-order tactics. To give one example, the first-order tactic *assure quality complements* encompasses several second-order tactics including *institute stratified platform access policy*, *implement screening/certifying system*, and *provide first-party content*, amongst others. A comprehensive overview of all identified second-order tactics (over 100) is out of scope for this short paper.

First, the model reveals an interesting activity cluster in the ecosystem context at the leadership stage (I, in Figure 2). Here, a trend was noticed whereby platform sponsors' focus shifts from a platform's core product and the technological infrastructure during early maturity phases, toward tactics to implement protective positioning on an ecosystem level. For example, platform sponsors seek to *actively shape regulations and institutions* (first-order tactic). To do so, they rely on a set of second-order tactics. Some, for instance, *expand the team of lobbyists*, as illus-

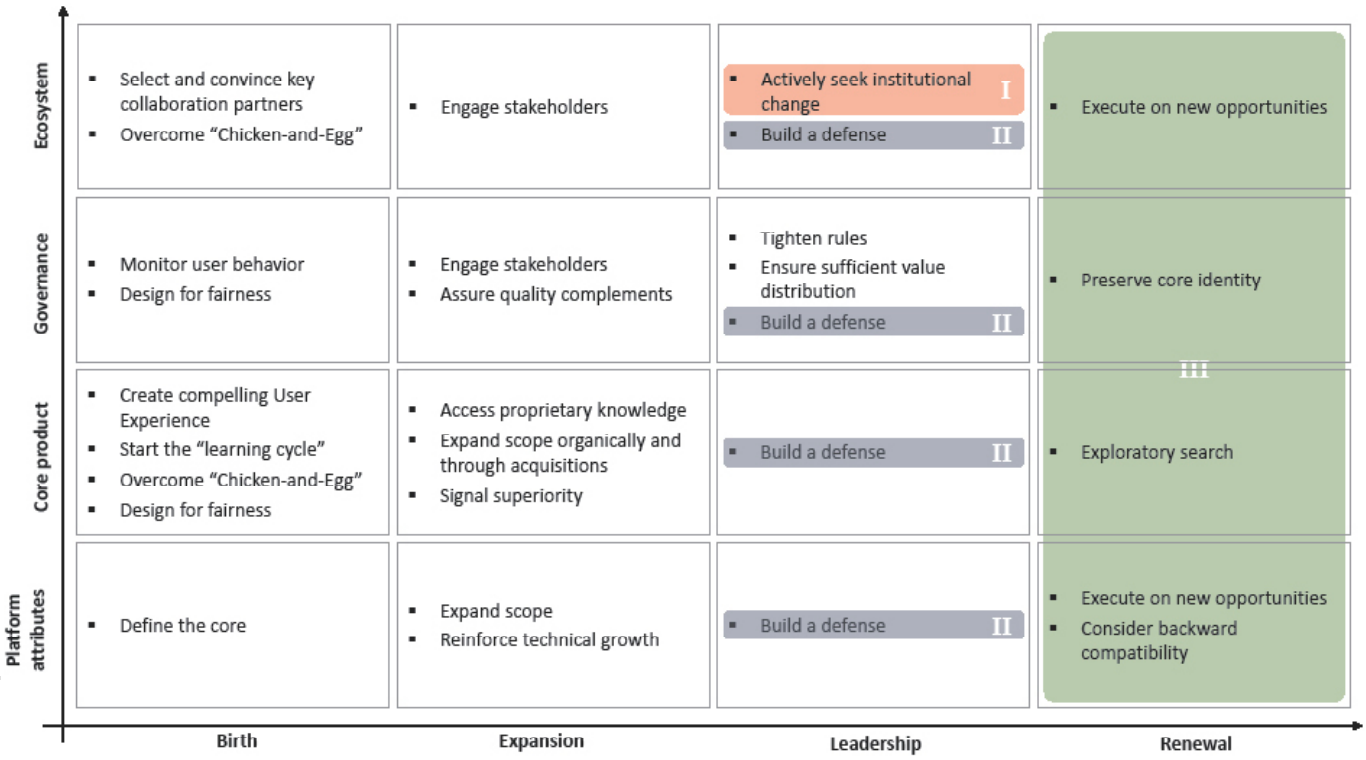

Figure 2: First-Order Digital Platform Tactics and Critical Insights

trated by big tech-firms – such as Google, Amazon or Apple - who have considerably increased their lobbying budgets in Brussels by 510% since 2014[1]. Others *invest in infrastructure deficits*, as exemplified by Google's ambitious project Loon, which aims to connect the unconnected in the developing world. Similarly, the free distribution of laptops to schools also carried out by Google to promote the use of digital services in education across the board is a suitable example. Another second-order tactic in this regard relates to *actively shaping the socio-cultural context*. Uber, for example, sent out emails to customers in Chicago proclaiming "Keep Chicago Uber!" to put pressure on law-makers after experiencing regulatory pressure. This interplay of digital platform leadership and institutional and regulatory aspects has been identified as a highly relevant area of research (Rietveld and Schilling, 2020; Kretschmer et al., forthcoming).

A second insight emerged around some first-order tactics spanning several (or all) contextual dimensions but appearing to be dominant in only one temporal dimension. The opposite, i.e. several temporal phases and one contextual phase, has not been found. One example for a "multi-dimensional" first-order tactic is *building a defense*, which prevails across all contextual dimensions in the leadership stage (II, in Figure 2). Existing research on digital platforms emphasizes a platform sponsor's general drive to maintain a controlling position by building entry barriers against rivals and newcomers (Gawer, 2020; Teece, 2017). However, through the proposed framework, practitioners and scholars can develop a more granular understanding of the tactical activities of platform sponsors across various contextual dimensions.

From a platform attribute perspective, platform sponsors build a defense by *selectively closing platform boundaries to weaken rivals* (McIntyre et al., 2020b). A prominent example concerns Facebook, which disallowed Vine's access to its API after Vine was acquired by Facebook's rival Twitter (Gawer, 2020). Facebook's tactic to weaken Vine paid off as Twitter abandoned Vine in 2016. Another second-order tactic is to *invest heavily in technological R&D to drive out rivals* (Gawer & Cusuamo, 2008). This tactic refers to what has been labelled "tipping" and encompasses the development of unique, compelling features that are hard to imitate. A good example can be found in the early days of the web browser market, where Microsoft Internet Explorer replaced the first browser developed by Netscape as the dominant market player. Besides being in an advantageous position of having a strong market presence with its Windows software, Microsoft also had much greater resources to continue investing in browser R&D – thereby winning the standard war against rivals and effectively building a defense (Gawer and Cusuamo, 2008).

Regarding the core product, platform sponsors *consider vertical integration* to build a defense. Content consumption devices, such as Amazon's Fire TV, Fire Stick, Kindle or Alexa drive users to the platform, enhance generativity, but also create strong lock-in effects (Aversa et al., 2020). Another tactic that relates to *building a defense* in the core product dimension is the *facilitation of learning investments and co-specialization* (Rietveld and Schilling, 2020). An example of a platform sponsor applying this tactic is Alibaba, which regularly invites complementors to join so-called "Dream Trips and Orange Success Camps". The goal of these initiatives is for complementors to learn and master the use of the Alibaba platform, which in turn creates incentives to remain a complementor in the future.

From a governance perspective, a closely related tactic is then to *prevent the transferability of the acquired knowledge* to another platform. A common practice for platforms is to allow both sides to develop a reputation and trustworthiness through a reciprocal rating mechanism (McIntyre et al., 2020b). In the case of Uber, for instance, both drivers and passengers are able to rate the service and experience. But Uber prevents the transferability of the drivers' and passengers' overall ratings to its competitor Lyft. Any complementor or user that changes the platform will then have to start building a new reputation on the competing platform. Another second-order tactic to build a defense in the governance dimension relates to rules that regulate interaction on

[1] According to an analysis conducted by Transparency International

the platform. In other words, what are members of the different sides allowed to do? Platform sponsors can allow users *access to multiple online services*, which is reported to have a similar effect to an all-you-can-eat dining experience (Aversa et al., 2020). Prominent examples include Google or Amazon, which allow users access to various online services, creating strong lock-in effects.

Finally, in the ecosystem dimension, as part of their defense, platform sponsors *continuously search for complementors that can threaten their central position* in the ecosystem. Google's Android operating system, for instance, spurred explosive global adoption, yet it also enabled other firms, including direct competitors, to build proprietary platforms 'on top' of it (Pon et al., 2014). To guard against this, Google actively scans the ecosystem to seek out potential threats. Similarly, platform sponsors need to *screen the industry for 'copy cats'* – entrepreneurial teams that try to imitate the platform and gain some of its market share (McIntyre et al., 2020b; Cennamo, 2019). The Berlin-based internet company Rocket Internet, for example, is notorious for its approach of imitating successful platform business models.

Interestingly, the first (I) and second (II) insights are highly related and show how the challenges of creating a successful digital platform also prevail after the critical expansion phase. To dominate in their respective industry, digital platform sponsors need to prove themselves able to build a proper defense across all contextual dimensions, while managing institutional and regulatory aspects that – after the expansion – become even more relevant.

A third insight relates to the relative paucity of digital platform tactics during the renewal phase, across all contextual dimensions (III, in Figure 2). Any advantage a platform sponsor may have during the leadership phase may disappear overnight should a competitor devise a superior business model (Morris, 2013). A set of tactics for self-renewal can thus be key and firms should therefore seek them well in advance. However, most existing work focuses on big, successful digital platform cases, such as Airbnb, Uber, Google, Facebook, or Apple, which tend to seamlessly renew their platform (Teece, 2017). Research on successful renewal of less-known digital platforms in 'niche markets', which have to go through more radical shifts due to technological advancements or market changes, is limited although highly relevant as it is during this critical evolution where many platforms fail (Gawer, 2020).

Discussion and Conclusion

In this short paper, we follow Cuc (2019) and others who encourage strategic management scholars to devote more attention to platform business models. Understanding the dynamics of platform competition is a strategic imperative for managers (McIntyre et al., 2020b). Yet, a gap exists in the literature concerning holistic and dynamic models of digital platform behavior. Our work contributes to this gap in three ways. First, this paper expands the concept proposed by Casadesus-Masanell and Ricart (2010) by adding platform business models as a potential strategic choice and introducing and defining digital platform tactics. Second, this paper extends the unidimensional view of tactical activities as proposed in the original model by presenting a novel framework encompassing a temporal and contextual dimension (see Figure 1). Third, the resulting four-by-four matrix was used to review the current digital platform literature and to identify and map over 20 first-order, leading to three indicative insights (see Figure 2).

This work has further theoretical implications for the wider digital platform strategy literature. Through the analysis and mapping of implicitly derived tactics from existing publications, the proposed framework helps scholars to cluster the contributions of different platform literature streams and to identify sparsely studied domains, as in the case of the renewal phase. In this way, it can help us to develop a holistic understanding of the complex platform phenomenon and to examine existing findings for generalizability (Taeuscher and Rothe, 2020).

Understood as a part of the broader management research, our work holds theoretical implications for the literature on dynamic capabilities (Teece, 2017). Authors have repeatedly criticized the under-specification of the dynamic capabilities construct, leading to frustration amongst scholars and practitioners (Schilke et al., 2018). We argue that our framework can contribute to a more nuanced

understanding of dynamic capabilities for digital platform business models. Capabilities are generally defined as the capacity to undertake activities (Helfat and Raubitschek, 2018) and our framework provides an overview of dozens of specific activities that digital platform sponsors undertake. The missing link is the question of which dynamic capabilities are needed to perform and implement these activities. This area provides fertile grounds for further research.

For managers and practitioners, the platform tactics model offers guidance into the range of activities necessary to implement and competitively operate digital platform business models. By subdividing the scope of possible activities in a temporal and contextual manner, the framework provides practitioners with a guide to classifying their own company or to planning future business activities. The illustrative examples of the platform tactics mentioned further serve practitioners as inspiration for action and possible food-for-thought for the development of alternative approaches to overcome for example the defensive tactics of dominant platforms in a given segment.

Our work does not come without limitations. We discuss digital platforms as general phenomena. It has been noted, however, that platforms can be distinguished into different types, for example transaction or innovation-oriented platforms (Gawer, 2020). Similarly, scholars emphasize that not all platform markets are the same – there is a distinction between "winner takes all" and "distinctiveness" markets (Cennamo, 2019). Further research could add these factors to our framework of digital platform tactics. Finally, from a strategic point of view, de Reuver et al. (2018) argue that a decomposition of "necessary" and "nice-to-have" conditions could enhance our understanding of digital platform competition. Applying this logic to digital platform tactics in our framework would allow us to distinguish between critical and less-critical tactics for platform operators. Here, more empirical work is needed to test the context and conditions under which a tactic becomes more or less critical.

In conclusion, this paper provides a theoretical framework that classifies the tactical activities used to implement strategic decisions, with a focus on platform business models. The temporal classification is intended to meet the need for a more dynamic description of digital platforms, while the contextual classification supports a more holistic understanding of them. We believe that this short paper marks the beginning of a relevant and insightful endeavor, which hopefully inspires other scholars and practitioners to contribute to the debate around digital platform tactics.

References

Aversa, P.; Haefliger, S.; Hueller, F. & Reza, D. R. (2020), Customer complementarity in the digital space: Exploring Amazon's business model diversification, *Long Range Planning*, in press, https://doi.org/10.1016/j.lrp.2020.101985.

Casadesus-Masanell, R. & Ricart, J. E. (2010), From Strategy to Business Models and onto Tactics, *Long Range Planning*, Vol. 43, pp. 195-215.

Cennamo, C. (2019). Competing in digital markets: A platform-based perspective. Academy of Management Perspectives. https://doi.org/10.5465/amp.2016.0048

Cuc, J. E. (2019), Trends of Business Model Research: A Bibliometric Analysis, *Journal of Business Models*, Vol. 7(5), pp. 1–24. https://doi.org/10.5278/ojs.jbm.v7i5.2981.

de Reuver, M.; Sørensen, C. & Basole, R. C. (2018), The digital platform: a research agenda, *Journal of Information Technology*, Vol. 33, pp. 124-135.

Gawer, A. (2020), Digital platforms' boundaries: The interplay of firm scope, platform sides, and digital interfaces, *Long Range Planning* (Forthcoming), https://doi.org/10.1016/j.lrp.2020.102045.

Gawer, A. & Cusuamo, M. A. (2008), How Companies Become Platform Leaders, *MIT Sloan Management Review*, Magazine Winter 2008

Helfat, C. E. & Raubitschek, R. S. (2018), Dynamic and integrative capabilities for profiting from innovation in digital platform-based ecosystems, *Research Policy*, Vol. 47(8), pp. 1391–1399.

Jacobides, M. G.; Cennamo, C. & Gawer, A. (2018), Towards a theory of ecosystems, *Strategic Management Journal*, Vol. 39(8), pp. 2255–2276. https://doi.org/10.1002/smj.2904.

Karhu, K.; Gustafsson, R.; Eaton, B.; Henfridsson, O. & Sørensen, C. (2020), Four Tactics for Implementing a Balanced Digital Platform Strategy, *MIS Quarterly Executive*, Vol. 19(2), pp. 105-120.

Kretschmer, T.; Leiponen, A.; Schilling, M. & Vasudeva, G. (forthcoming), Platform ecosystems as meta-organizations: Implications for platform strategies, *Strategic Management Journal*, n/a (n/a). https://doi.org/10.1002/smj.3250.

Mackay, D. & Zundel, M. (2017), Recovering the Divide: A Review of Strategy and Tactics in Business and Management, *International Journal of Management Reviews*, Vol. 19(2), pp. 175–194. https://doi.org/10.1111/ijmr.12091.

McIntyre, D. P.; Srinivasan, A. & Chintakananda, A. (2020a), The persistence of platforms: The role of network, platform, and complementor attributes, *Long Range Planning*, (Forthcoming), https://doi.org/10.1016/j.lrp.2020.101987.

McIntyre, D. P.; Srinivasan, A.; Afuah, A.; Gawer, A. & Kretschmer, T. (2020b), Multi-Sided Platforms as New Organizational Forms, *Academy of Management Perspectives*, in press.

Morris, L. (2013), Business Model Warfare: The Strategy of Business Breakthroughs, *Journal of Business Models*, Vol. 1(1). https://doi.org/10.5278/ojs.jbm.v1i1.617

Parker, G. & Van Alstyne, M. (2018), Innovation, Openness, and Platform Control, *Management Science*, Vol. 64(7), pp. 3015-3032.

Pon, B.; Seppälä, T. & Kenney, M. (2014), Android and the demise of operating system-based power: Firm strategy and platform control in the post-PC world, *Telecommunications Policy*, Vol. 38(11), pp. 979–991, https://doi.org/10.1016/j.telpol.2014.05.001.

Rauch, A.; Van Doorn, R. & Hulsink, W. (2014), A Qualitative Approach to Evidence-Based Entrepreneurship: Theoretical Considerations and an Example Involving Business Clusters, *Entrepreneurship Theory and Practice*, Vol. 38(2), pp. 333-368, https://doi.org/10.1111/etap.12093.

Rietveld, J. & Schilling, M. A. (2020), Platform Competition: A Systematic and Interdisciplinary Review of the Literature, *Journal of Management*, Forthcoming, https://doi.org/10.1177/0149206320969791

Schilke, O.; Hu, S. & Helfat, C. E. (2018), Quo Vadis, Dynamic Capabilities? A Content-Analytic Review of the Current State of Knowledge and Recommendations for Future Research, *Academy of Management Annals*, Vol. 12(1), pp. 390–439, https://doi.org/10.5465/annals.2016.0014.

Sorri, K.; Seppänen, M.; Still, K. & Valkokari, K. (2019), Business Model Innovation with Platform Canvas, *Journal of Business Models*, Vol. 7, No. 2, pp. 1-13.

Taeuscher, K. & Rothe, H. (2020), Optimal distinctiveness in platform markets: Leveraging complementors as legitimacy buffers, *Strategic Management Journal*, Forthcoming, https://doi.org/10.1002/smj.3229

Teece, D. J. (2017), Dynamic Capabilities and (Digital) Platform Lifecycles, Entrepreneurship, Innovation, and Platforms, *Advances in Strategic Management*, Vol. 37, Emerald Publishing Limited, pp. 211-225, https://doi.org/10.1108/S0742-332220170000037008.

Trabucchi, D. (2020), Let's Get a Two-Sided Platform Started: Tactics to Solve the Chicken and Egg Paradox, *Journal of Business Ecosystems*, Vol. 1(1), pp. 63-77, doi:10.4018/JBE.2020010104.

Trabucchi, D.; Talenti, L. & Buganza, T. (2019), How do big bang disruptors look like? A business model perspective, *Technological Forecasting and Social Change*, Vol. 141; pp. 330-340, https://doi.org/10.1016/j.techfore.2019.01.009.

Van Andel, W. (2019), Tactical Shapeshifting in Business Modeling, *Journal of Business Models*, Vol. 7(4), pp. 53-58.

Webster, J. & Watson, R. (2002), Analyzing the Past to Prepare for the Future: Writing a Literature Review, *MIS Quarterly*, Vol. 26(2), pp. xiii-xxiii.

Zhu, F. (2019), Friends or foes? Examining platform owners' entry into complementors' spaces, *Journal of Economics & Management Strategy*, Vol. 28(1), pp. 23–28, https://doi.org/10.1111/jems.12303.

About the Authors

Matthias Trischler is a PhD student at the Centre for Technology Entrepreneurship, Technical University of Denmark. His research interest is on the digitalization of small and medium-sized enterprises with particular focus on business model innovation. In collaboration with the Danish Design Centre, he is examining the role of (digital) innovation labs in the transformation of incumbents. At the Centre, he is a member of the Tech4Impact steering group, which aims to incorporate impact thinking in the form of the UN's Sustainable Development Goals into all research and educational activities. Matthias is active as a lecturer in various courses at DTU, including a course on Digital Trends for Entrepreneurs for the MSc. in Technology Entrepreneurship. He holds a MSc. in Business and Development Studies from Copenhagen Business School and has worked as a strategy consultant for several years prior to his PhD project.

Philip Meier joined HIIG in March 2018 and since then has been a researcher in the SME 4.0 project, which is funded by the German Federal Ministry of Economics and Energy. Within the project, Philip conducts a study on the application of digital technologies in SMEs and develops need-based qualification formats on the basis of the gathered insights. He is a doctoral student at the Institute for Electronic Business under Prof. Dr. Dr. Thomas Schildhauer. As part of his dissertation, Philip is investigating governance and business model development of digital platforms in B2B markets. Philip has been invited as a guest researcher to the University of St. Gallen (2018) and Stanford University (2019). Prior to his research at HIIG, Philip gained practical experience in the Group Digitalization Department at Volkswagen in Wolfsburg, where he was responsible for business model development in the context of Industry 4.0.

Daniel Trabucchi is an assistant professor at the School of Management of Politecnico di Milano, where he serves as a researcher of LEADIN'Lab, the Laboratory for Leadership, Design and Innovation. His research interests are focused in Innovation Management. In particular, he has been working on digital two-sided platforms and their peculiarities (focusing on how they can create and capture value and the related data driven business models), moreover he focuses on the human side of innovation, exploring engagement mechanisms in innovation through the research platform IDeaLs. His research has been published in peer-reviewed journals such as Journal of Product Innovation Management, Technological Forecasting and Social Change, Internet Research, Research-Technology Management, Creativity and Innovation Management, Technology Analysis and Strategic Management and European Journal of Innovation Management; he is also a reviewer for many of these journals.